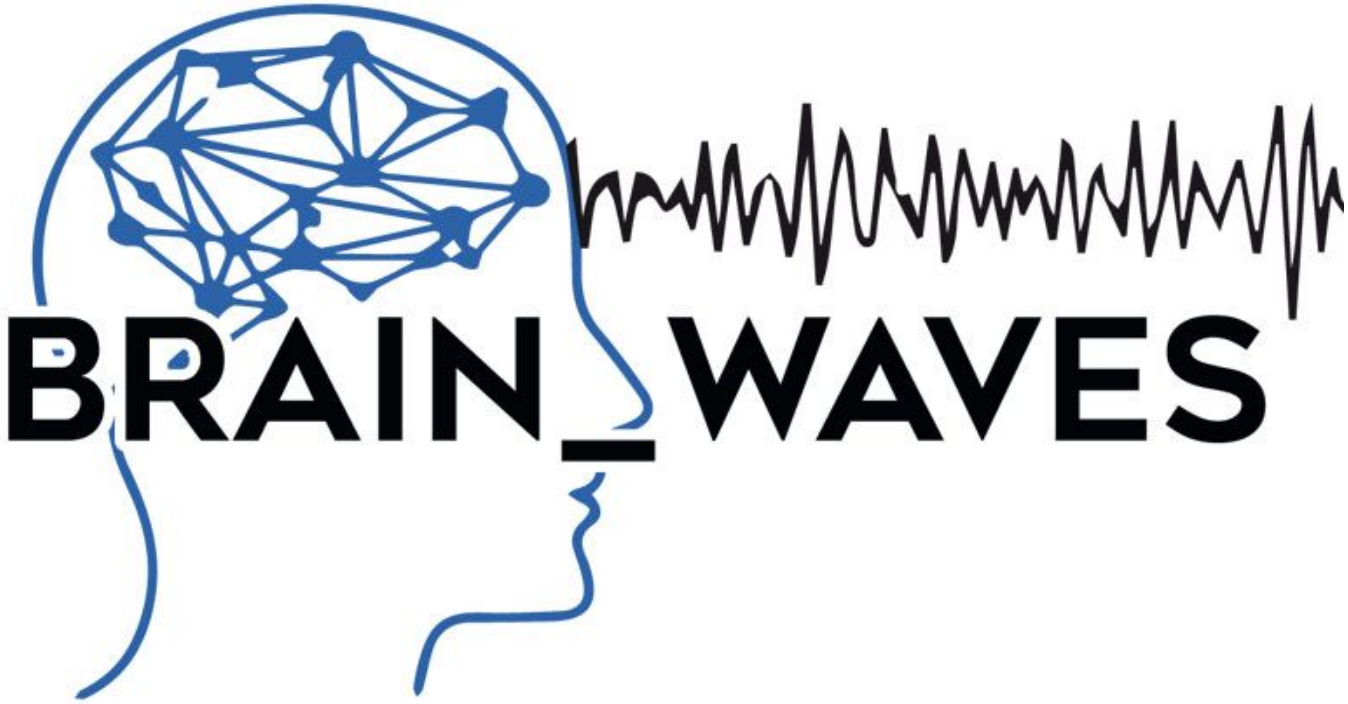


The BrainWave Story

Translating Brain signals into Bits

It is since **2014** that Massimo is envisioning a future in which the electrical stimuli generated by the **brain** can be translated into a string of **bits (1,0)** - a language that a machine is able to understand

Throughout the years, thanks to his background in Cryptography and his team of Engineers, Massimo started to explore **possible implementations** of this original idea

The BrainWave Story

The first ‘Brain Password’

The first **breakthrough** came with the invention of the “**Brain Password**”, the first Authentication System enabled through the Brain, that allows anyone to log-in using uniquely the electrical stimuli detected from the brain

The prototype was launched in 2019 and a **patent** for the device was officially approved in 2020

The BrainWave Story

Ground-breaking innovation in BCI

The BrainPassword was only the beginning. If it's possible for a computer to detect and understand the brain signals, then **any type of device** can potentially be controlled through the human mind

Massimo and his team doubled-down their efforts to develop a new ground-breaking **BCI device** - **BrainWaves**

The BrainWave Story

Flying drones using the power of the brain

The second major implementation of BrainWave was the creation of a **non-invasive BCI device** that would allow to remotely control an unmanned **drone**

The prototype was launched officially in **2023** and in the beginning of the same year the first **patent** was officially approved

The BrainWave Story

Applications in healthcare

BrainWave is committed to exploring the full potential of BCI devices across various industries, with the goal of **positively impacting people's lives.**

BrainWave's upcoming project involves developing a **mobility aid** for individuals with physical disabilities.

The BrainWave Story

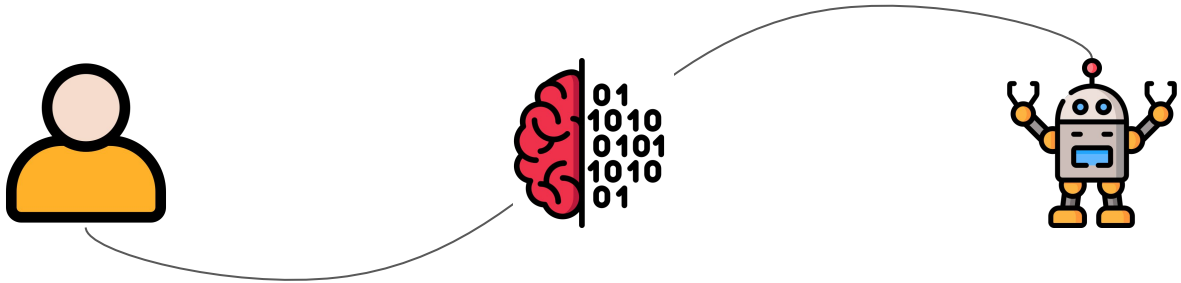
Envisioning the future

BrainWave aims to revolutionize the way **humans interact with machines**, and to create a positive impact on the future of society and civilization.

The potential applications of BrainWave's BCI device are **wide-ranging** and have yet to be fully explored. Let’s start this journey together.

Brain-Computer Interfaces (BCI)

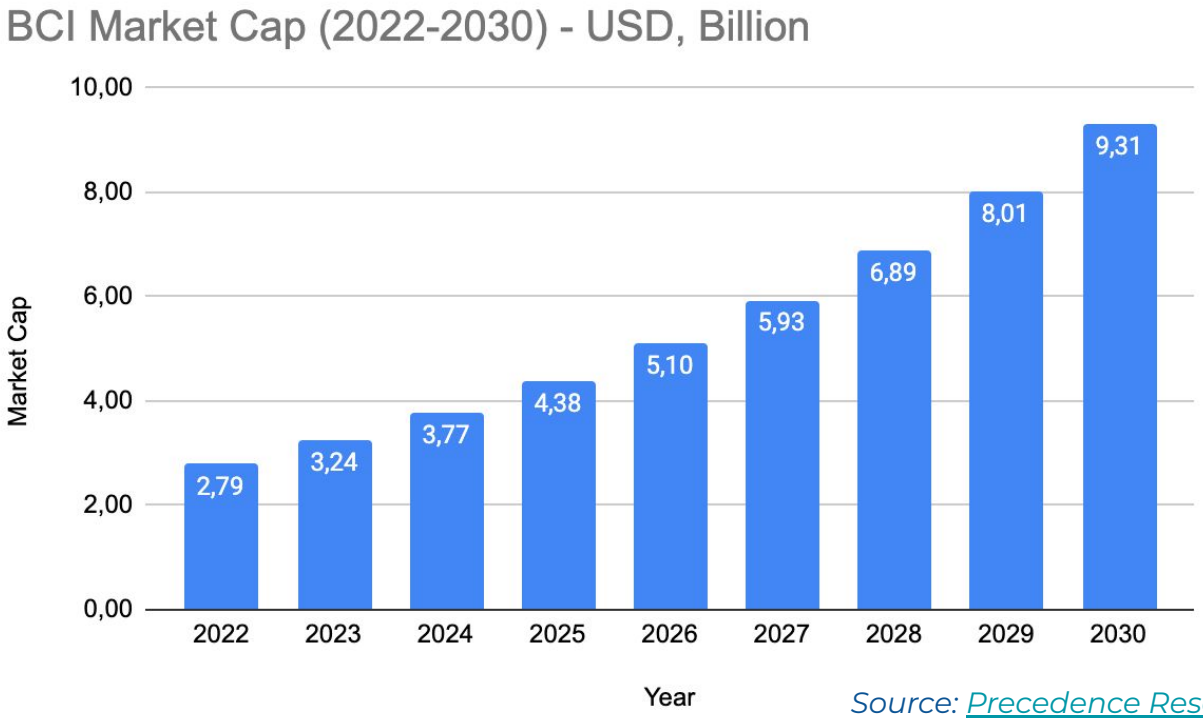
Brain Computer Interface (BCI) is a technology that enables a **direct connection** between the human **brain** and **electronic devices**



The goal of BCI is to create a **seamless**, natural, and intuitive connection between the human brain and machines, enabling people to **interact** with their devices in new and innovative ways.

BCI Market Size

BCI market cap has been steadily growing and it is estimated to reach USD **9 billion+** by 2030 (CAGR 16+%)



Source: Precedence Research

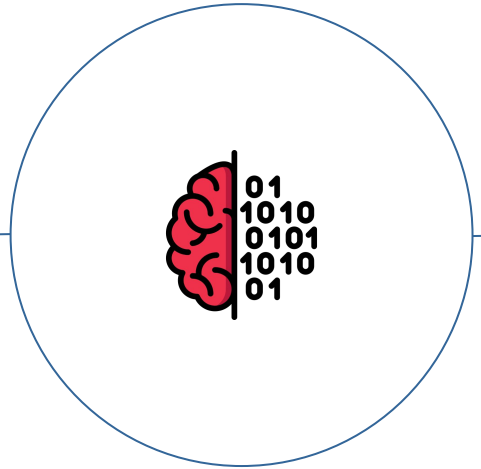
Implementations of BCIs

However, there are still **obstacles** to mass adoption of BCI devices. Non-invasive techniques have a **low accuracy** in detecting brain signals, while invasive ones have a high risk of **injuries** (brain scarring) and require a **surgical procedure**

Non-invasive

- No surgical procedure
- Low risk of injuries/infections
- Cheaper production cost
- Easy to use

- Lower accuracy



Invasive

- Higher accuracy

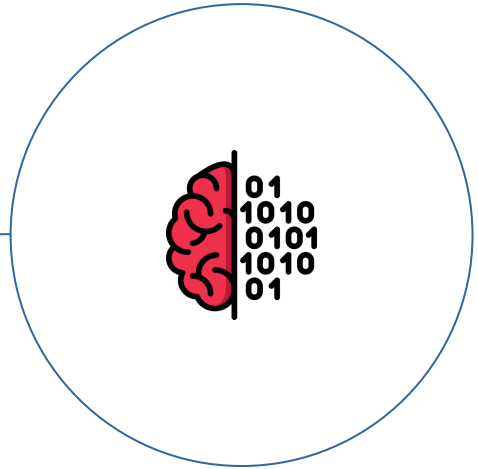
- Surgical procedure
- Risk of injuries/infections
- Expensive
- Requires specialized training

Implementations of BCIs

Non-invasive BCI devices have the **potential to go mainstream** provided that they are able to increase the accuracy of the detected brain signals and movements.

Non-invasive

- ⊕ No surgical procedure
- Low risk of injuries/infections
- Cheaper production cost
- Easy to use
- ⊖ Lower accuracy



BrainWaves Innovation in BCI

BrainWaves **revolutionizes** the world of BCI devices by providing a **high-accuracy non-invasive** tool, thanks to its innovative technology

Non-invasive

- No surgical procedure
- Low risk of injuries/infections
- Cheaper production cost
- Easy to use

~~Lower accuracy~~

BRAIN_WAVES

BrainWaves is a **cutting-edge non-invasive** BCI technology.

With its **patented** device, BrainWaves can accurately detect the sensorial movements transmitted to the brain in real-time

BrainWaves represents a **major step forward** in the development of BCI technology

BrainWaves - The Prototype

BrainWaves **engineers** already succeeded in developing a functioning prototype that can showcase the potential of its innovative technology

BrainWaves prototype as presented at CES 2023 in Las Vegas

BrainWaves - Disrupting multiple industries

The possible applications of BrainWaves BCI device have the potential to be disruptive in different industries, including healthcare, gaming and military

Healthcare

Neuroprosthetics

Rehabilitation

Communication

Gaming/Entertainment

Immersive experiences

VR/AR

Civilian drones

Military

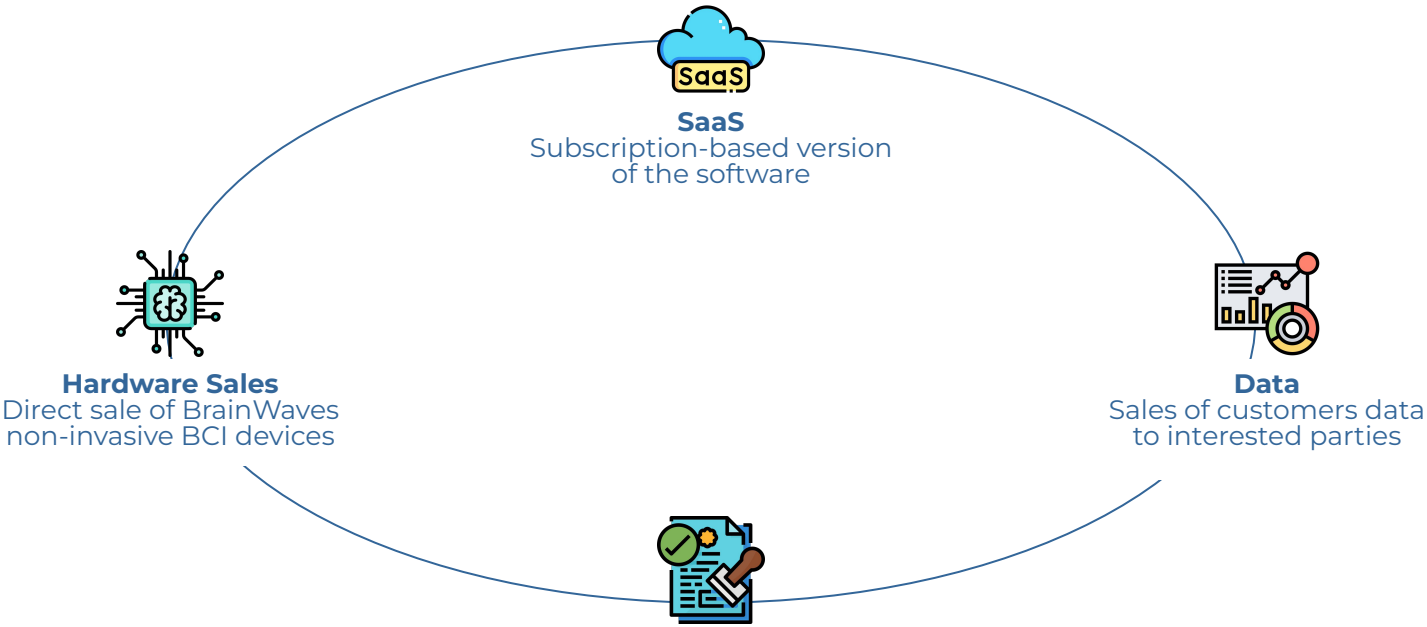
Unmanned vehicles

Military communication

Military drones

BrainWaves - Revenue model

BrainWaves' BCI devices have different potential ways of generating revenues both from sales of hardware, software, data and Licensing models.



SaaS
Subscription-based version of the software

Hardware Sales
Direct sale of BrainWaves non-invasive BCI devices

Data
Sales of customers data to interested parties

Licensing
Licensing of SDK/chips with local partners/distributors

The Team

Massimo Bertaccini PhD
CEO

Passionate Cryptographer, Scientist, and Author. Cybersecurity and Privacy Expert. Co-Founder at Cryptolab: a private Company focused on Innovative Solutions for Cryptography and Cyber Security. Among his projects: he designed and implemented the first Crypto-Search-Engine for Encrypted data. Author of several Patents in Cryptography and Cyber Security. Recently, published by Packt the Book: Cryptography Algorithms. Winner of dozens of Prizes and Honors, among which "The Silicon Valley Inventors", "The Seal of Excellence", and "The European Business Award".

Tiziana Landi
Chief Engineer

Alessandro Passerini
CTO

Marco Massari
Senior Engineer

Andrea Gallucci
CSO